ABSTRACT OF THE DISCLOSURE

An internal combustion engine in accordance with one aspect of the invention is characterized by comprising a combustion chamber, a reformer, and a control portion. A predetermined fuel component is burnt in the combustion chamber. The reformer has a reforming catalyst, and that produces a reformed gas which contains the fuel component obtained by reforming a mixture of fuel and air and which supplied to the combustion chamber. The control portion sets an air-fuel ratio of the mixture in the reformer such that a reforming efficiency of the reformer is held within a predetermined range, and sets an amount of the mixture supplied to the reformer such that an actual output torque of the internal combustion engine coincides with a target torque.